4/11/2011

James Arden Barnett, Jr., Chief
Public Safety and Homeland Security Bureau
Federal Communications Commission
Washington, D.C. 20554

Re: Comments in response to the Third R&O and Fourth NPRM, FCC 11-6
WT Docket No. 06-150, PS Docket No. 06-229 and WP Docket No. 07-100

Dear Mr. Barnett:

On May 13, 2010, the Las Vegas Metropolitan Police Department (LVMPD), Washoe County Sheriff's Department (WCSD), the Washoe County Regional Communications System (WCRCS), the Nevada Department of Transportation (NDOT), and NV Energy (NVE), representing the State of Nevada 700 MHz Broadband Wireless Network (SoNNet) consortium, respectfully requested that the Federal Communications Commission (FCC) waive its Rules to authorize the early deployment and operation of a 700 MHz interoperable public safety broadband network in the State of Nevada.

On January 26, 2010, the Commission released its Third Report and Order and Fourth Further Notice of Proposed Rulemaking (FCC 11-6) seeking comments on a number of issues relating to the proposed Rules for the deployment of 700 MHZ Public Safety Broadband Networks. The entities filing the waiver request noted above are very interested in the 700 MHz Public Safety Broadband proceeding, and as an operator of a statewide shared system, is qualified to offer comments based on actual operational experience.

The following comments are offered on behalf of NV Energy as a member of the Nevada Shared Radio System (NSRS) in support of these proceedings.

BACKGROUND

Nevada is a frontrunner in the collaborative efforts to develop state-wide two-way radio communications systems using shared public and private resources since the formation of the Nevada Shared Radio System (NSRS) in 1995. This system combines the physical and spectrum resources of several State of Nevada and county agencies, and the state's electric service provider, to provide critical two-way radio communications across the entire state. The principal stakeholders in this venture are the Nevada Department of Transportation (NDOT), Nevada Energy (NVE) and Washoe County (WC). Users of the shared radio system include law enforcement, fire service, regional and statewide transportation, parole and probation, state universities as well as a private utility providing electric service statewide. This system continues to expand and successfully operate today, fifteen (15) years after its inception, and is a good example of public-private cooperation at the state-wide level. This collaborative arrangement has allowed the State of Nevada to deploy a more extensive Public Safety network than would have been possible on its own.

COMMENTS TO SPECIFIC ITEMS IN THE R&O AND NPRM

III. THIRD REPORT AND ORDER

A. Common Technology Platform

The Commission is to be applauded on its requirement for a Common Air Interface (CAI) for this new radio service. The use of a CAI facilitated the growth of the initial Commercial Cellular Services in the 1980s because it provided the technical means for interoperability across various vendors' infrastructure and enabled nationwide roaming. The same result can be expected for nationwide Public Safety networks using a CAI.

With respect to the issue of certification of interfaces in the LTE reference architecture in paragraph 12 of the Third R&O, certification should be the responsibility of the equipment vendors and not the network operators. It is the equipment vendors that control the design of these interfaces and the protocols used. They have the technical expertise in this area and are in a better position to assure system components interoperate properly in a multi-vendor environment.

IV. FOURTH FURTHER NOTICE OF PROPOSED RULEMAKING

We believe the Commission is correct in proposing to amend its definition of interoperability in paragraph 16 to harmonize it with that of the Department of Homeland Security (DHS), and support such an action.

A. Technical Rules for the Public Safety Broadband Network

1. Architectural Framework

Adequate standards must exist to assure nationwide interoperability. We suggest that the Commission sanction a standards body made up of public safety agencies, network operators, and equipment vendors to set the direction and standards for the development of the network architecture and interfaces over time. This would be preferable to having the Commission taking on this responsibility as it would the place standards process with a body whose sole purpose and focus is this task.

2. Architectural Guiding Principles

In paragraph 25, the Commission asks whether there are other principles to consider, such as maximizing network efficiencies by sharing resources such as core networks. We believe this is critical to the success of the nationwide deployment. Many states have existing networks that can be leveraged to facilitate the deployment of a nationwide public safety network. The concept should not end with networks operated by state and local agencies, but should permit the use of other private networks, including those of the power companies and other critical infrastructure providers. The critical infrastructure providers, especially the electric utilities, have extensive fiber networks in place that are used for monitoring and control of the electric power grid. Many of these facilities are ideally suited for broadband communications, and have spare capacity available that can be used to facilitate the build out of the backbone network.

4. Technology Platform and System Interfaces

The points raised in paragraph 29 relating to the technology platform and system interfaces are very important. Realistically, the public safety network cannot be expected to advance as fast as the commercial network since the state and local agencies deploying these networks will not

have the level of financial resources available that the commercial operators do. As such, there should be a basic set of core voice and data communications requirements that are mandatory for all networks to assure interoperability. Operators should, however, be permitted to provide additional features and services as long as they do not impair the core communications requirements.

6. Roaming Configurations

The same point made above in Technology Platform and System Interfaces should be applied to commercial operators providing LTE services in the 800 MHz band. These operators should be required to maintain backward compatibility to the basic mandatory set of core voice and data communications requirements described above. Requiring backward compatibility will facilitate the development and deployment of 700/800 MHz terminal equipment and provide for more extensive coverage during the deployment stages of the public safety networks. It is reasonable to expect that the commercial operators will be "out in front" when it comes to coverage deployment, and the public safety network operators can leverage the coverage provided by the commercial operator during the early deployment phases of their public safety networks.

13. Interconnection With Legacy Public Safety Networks

The interconnection with legacy public safety networks should be permitted at the discretion of the network operator, as long as these interconnections do not impair the basic operation of the broadband network. These interconnections will be very important during the initial deployment phases of the broadband network as they will provide the means to transition from the legacy networks to the broadband network. There are a variety of technologies and architectures used in the legacy networks, many of which are proprietary, and this effectively precludes developing specific guidelines for these interconnections. As a result, the details of these interconnections are best left up to the local operators.

14. Performance

The issue of network performance, discussed in paragraph 61 of the NPRM, particularly as it relates to radio coverage, should be left up to the individual network operators. Radio coverage is directly related to investment, and some operators may not have the resources available to meet a

mandated common set of performance criteria. This is particularly true of the more rural areas with lower incomes and population densities. However, within the coverage areas, a minimum, cell-edge data rate of 256 kbps uplink and 769 kbps for the down link outdoors should be required, but with a 50% sector loading requirement. In rural areas is unlikely a more stringent requirement will be needed.

As for documenting and certifying the performance mentioned in paragraph 62, the use of coverage maps should be required. They should include the site locations and the coverage should be based on simulations using models that are validated using drive test data samples.

15. Network Capacity

Backhaul capacity for public safety broadband networks mentioned in paragraph 64 should be determined by the network operator. The makeup of the service area varies within and between networks, so setting a fixed requirement may result in deploying more capacity than is needed, especially in the rural areas. This additional capacity comes at an increased cost, and may unnecessarily burden some local operators.

18. Coverage Requirements

The level of coverage provided by land mobile systems is usually limited by the financial resources available to deploy the network infrastructure. In rural areas, it can be very expensive to provide coverage, in terms of the cost per person covered, compared to residential and urban areas. If the Commission were to mandate coverage requirements, some operators may not have the financial means to deploy networks capable of meeting the mandated coverage requirements. The local operators are much closer to the need for coverage, and as such, the level of area coverage should be left to the discretion of the local network operators. Should the Commission decide to mandate coverage requirements, then they should be low enough that the large western states where the population densities are low will be able to meet these requirements.

19. Coverage Reliability

While proposing that the definition of the coverage areas be left up to the local system operators, the coverage reliability within those areas should be mandated. It is important that the coverage

reliability in areas where coverage is stated or shown to exist be high enough in quality to insure usable and reliable communications service. The 95% reliability criterion proposed in the NPRM is widely accepted in narrowband public safety coverage design and is a good objective for broadband services.

B. Public Safety Roaming on Public Safety Broadband Networks

3. Public Safety Roaming Rates

The Nevada Shared Radio System (NSRS) is a multi-agency, state-wide network shared with NV Energy, the state-wide electric provider. The current arrangement has all of the participants supporting the radio system without charges for roaming. The primary purpose of the broadband network will be to support local operations, including state-wide agencies. The NSRS does not have the means to implement usage-based allocation of costs. To charge for roaming will require the network operator to install billing equipment and set up a billing operation, and that will result in additional operational costs. The NSRS does not now charge for roaming and does not plan to do so on a broadband network, if deployed. Instead, the NSRS will allow roamers on its network, and they will be assigned the lowest access priority unless the local operator chooses to provide specific roamers a higher priority. The provision to charge for roaming should be a local option.

C. Federal Use

1. Section 2.103

The same concept described above for roaming should also be applied to Federal users. That is, they should be permitted to roam on the broadband network at the lowest access priority available unless the local operator chooses to provide specific Federal roamers a higher priority.

D. Testing and Verification to Ensure Interoperability

1. Conformance Testing

Although testing should be done, it costs money to test networks. The question is what level of testing is appropriate? The PSST should set the levels of conformance testing in such a manner

as to verify network functionality for the basic mandatory services. Attempting to test every feature and function for every network will add to the deployments costs, and deployment costs will be a very important issue for most operators.

2. Interoperability Testing

The philosophy stated above should also be applied to interoperability testing. The PSST should set the levels of conformance testing in such a manner as to verify basic network interoperability.

E. Other Matters Relevant to Interoperability on Public Safety Broadband Networks

4. In-Building Coverage

The make-up and character of each community varies across a service area and across the nation in response to local building codes and the physical environment. As a result, in-building coverage requirements will be considered on an individual building basis in many instances. The specification of in-building coverage should be left up to the network operator. The operator is in the best position to determine which areas will need additional margin and which buildings warrant special indoor coverage treatment.

PUBLIC INTEREST

The deployment of a nationwide interoperable broadband system is in the public interest. Furthermore, the Commission should strongly consider permitting public safety entities to partner with other public and private entities to leverage existing infrastructure usable in deploying the public safety broadband network. This will permit public safety agencies to deploy their networks faster and at a lower cost than if they have to "go it alone." The Nevada Shared Radio System is a prime example. Here, the State of Nevada and NV Energy and other public agencies share an 800 MHz system deployed using infrastructure assets from several of the NSRS members. A 700 MHz broadband system will require even more infrastructure due to the smaller cell radii and the need for a higher capacity core network. The power company has numerous substations and other sites in the electric distribution system that could be used as base station sites. It also has an extensive fiber network between these sites that could be used for backhaul. If a public-private partnership were permitted, the State of Nevada would be able to

deploy a more extensive broadband system quicker than if all these facilities had to be duplicated. Bringing public safety systems to more of the population faster is in the public interest, and partnerships with other public and private infrastructure providers should not only be permitted, but encouraged.

Respectfully submitted,

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